

DRISS HAOUHAOU

Fullstack & Systems Software Developer

Concurrency, Networking & Scalable Web Architectures

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Software Developer with a strong technical foundation bridging low-level systems programming and modern full stack web development. Trained at 42 Paris, excels in autonomous problem-solving, meticulous memory management, and designing high-performance applications. Proven capacity to quickly master complex architectures and deliver production-ready code.

TECHNICAL SKILLS

Backend & APIs: Node.js (*Intermediate*), Fastify (*Intermediate*), TypeScript (*Intermediate*), JavaScript (*Intermediate*), PHP (*Basic*)
REST APIs (*Intermediate*), Swagger (*Basic*)

Frontend: Vue.js (*Basic*), HTML5 (*Intermediate*), CSS3 (*Intermediate*), Tailwind CSS (*Basic*), Bootstrap (*Basic*)

Systems Programming: C (*Proficient*), C++98 (*Proficient*), OOP (*Intermediate*), Multithreading/Mutex (*Proficient*),
Processes/Fork/Signals/Pipes (*Proficient*)

Networking: TCP/IP Sockets (*Proficient*), Poll / Select (*Proficient*), Client-Server Architecture (*Proficient*), WebSockets / Socket.io (*Intermediate*)

Databases & DevOps: SQLite (*Intermediate*), MySQL / MariaDB (*Intermediate*), Prisma ORM (*Intermediate*), Redis (*Intermediate*),
Docker (*Intermediate*), Docker Compose (*Intermediate*), Nginx (*Intermediate*)

Tools: Git (*Intermediate*), Valgrind (*Proficient*), Makefile (*Proficient*), Linux / Unix Environment (*Proficient*)

SOFT SKILLS

Autonomy | Analytical Mindset | Problem Solving | Technical Curiosity | Fast Learner | Team Collaboration

KEY ENGINEERING PROJECTS

ft_transcendence — Full stack Web & Micro services Platform (*Group*) 2024 - 2025

- Built a real-time chatbox Single Page Application (SPA), and social features.
- Developed a high-concurrency backend using Node.js, Fastify, TypeScript, and Socket.io for bidirectional streaming.
- Integrated data persistence with Sqlite using Prisma ORM, and optimized sessions via Redis memory cache.
- Orchestrated containerized micro services deployment with Docker, Docker-Compose, and Nginx reverse proxy.

ft_irc — Low-Level Multi-Client Internet Relay Chat Server (*Group*) 2024

- Engineered a fully functional IRC server adhering strictly to the official RFC network protocol guidelines.
- Implemented architecture in structured C++ utilizing Object-Oriented Programming (OOP) and Orthodox Canonical Form.
- Managed simultaneous user traffic via non-blocking TCP/IP Sockets combined with I/O multiplexing (*poll/select*).

minishell — Unix Command-Line Interpreter (*Group*) 2024

- Designed a fully operational command-line shell with syntax parsing, environment execution, and built-in commands.
- Controlled low-level process life cycles through POSIX system calls including fork, waitpid, and execve.
- Handled inter-process communication via pipes, and asynchronous UNIX signal catching.

cub3d — 3D Raycasting Graphic Engine (*Group*) 2023

- Developed a first-person 3D graphic rendering engine based on raycasting principles (*similar to Wolfenstein 3D*).
- Implemented vector/trigonometric mathematics and memory management in C using a basic pixel library.
- Ensured leak-free execution and robust allocation safety using rigorous tracking with Valgrind.

Philosophers — Multithreading & Concurrency Algorithm (*Solo*) 2023

- Resolved Dining Philosophers problem to demonstrate effective resource allocation under hardware constraints.
- Programmed simulation in C managing concurrent system Threads and synchronization loops.
- Eliminated deadlocks, race conditions, and memory corruptions using strategic Mutex locking policies.

EDUCATION & BACKGROUND

Software Developer — 42 Paris

2023 - Present

LANGUAGES

- **French:** Native / Fully Proficient (*Fluent written, read, spoken*)
- **English:** Beginner / Professional Working Knowledge (*Written, read*)
- **Arabic:** Moroccan Dialect (*Spoken*)

INTERESTS

- Hiking, Nature Exploration, New Technologies, Internet Infrastructure, and Open Source Software.